

ABSTRACT OF THE DISCLOSURE

An apparatus for forming a nano grating device to film nano-scale interference fringes by holography in order to makes a nano-scale meshed structure is disclosed. A beam emitted form a light source passes subsequently through a beam splitter and two reflectors to reach at
5 symmetrically mounted light emitting modules. The light emitting modules generate two beams passing along the same optical paths and then projecting on a photosensitive substrate that is attached on a hemi-sphere lens. Thus, a first set of interference fringes are formed. Then, the substrate rotates with an angle and then is subjected to exposure to form a second set of interference fringes crossing the first set of interference fringes. Thereby, a nano-scale
10 meshed structure is obtained.